Notice of Allowability	Application No.	Applicant(s)	
	10/665,586	CREAMER ET AL.	
	Examiner	Art Unit	
	Jason Mitchell	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *an amendment filed 8/02/07*.

2. ☒ The allowed claim(s) is/are *1-27, 29-30 (renumbered 1-29*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20071004* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Richard Hinson (reg. #47,652) on 10/4/07.

The application has been amended as follows:

1. (Currently Amended) A method for supporting a user application in a grid environment comprising the steps of:

providing a customer service application configured to register a plurality of hosts operating in a plurality of grids for performing host-based operations and to convey control signals for synchronizing a plurality of ghost agents operating in said plurality of grids for performing customer service operations on one of the plurality of hosts, the customer service application having a service interface configured to prevent unauthorized access to the customer service application;

wherein said plurality of hosts are software objects for an application domain distributed within a grid environment, said grid environment being a distributed computing system that includes a plurality of hardware and software components;

receiving a problem indication relating to one of said ~~application~~plurality of hosts;

identifying at least one of the plurality of hosts operating within a grid of said grid environment;

associating a ghost agent within said grid with said at least one identified host, said ghost agent being configured to include at least one of a test engine, a ghost log, and a controller, wherein the test engine loads test routines into said ghost agent, executes the test routines in response to received test commands, and analyzes within said ghost agent results of the executed test routines, wherein the ghost log stores log data internally within said ghost agent and, periodically or at irregular intervals, deposits the log data to a local location, after which the ghost agent clears the ghost log, wherein said controller accepts control signals from the customer service application and controls at least one of a life-span of said ghost agent and resources used by said ghost agent, and wherein said ghost agent is configured to replicate at least one action of said at least one identified host within said grid;

retrieving log data stored at the local location and conveying the retrieved log data to a ghost log repository using at least one data-reaping object;

recording data relating to said replicated actions;

responding to said problem based at least in part upon said recorded data moving said at least one identified host from said grid to another grid within said grid environment; and,

in response to said moving of said at least one identified host, moving said ghost agent from said grid to said another grid.

14. (Currently Amended) A customer service environment comprising:

a plurality of hosts, wherein said hosts are software objects for an application domain distributed within a grid environment, said grid environment being a distributed computing system that includes a plurality of hardware and software components;

at least one ghost agent configured to be associated with at least one of said hosts to replicate and record at least one action of said at least one of said host, wherein said ghost agent moves within a grid environment and is configured to include at least one of a test engine, a ghost log, and a controller, said test engine configured to load test routines into said ghost agent, execute the test routines in response to received test commands, and analyze within said ghost agent results of the executed test routines, said ghost log configured to store log data internally within said ghost agent and, periodically or at irregular intervals, deposit the log data to a local location, after which the ghost agent clears the ghost log, and said controller configured to accept control signals from an external source and control at least one of a life-span of said ghost agent and system resources used by said ghost agent;

at least one data-reaping object for retrieving log data stored at the local location and conveying the retrieved log data to a ghost log repository;

a customer service application configured to register the plurality of hosts for performing host-based operations to determine actions leading to at least one problem utilizing the at least one associated ghost agent and to convey control signals for synchronizing a plurality of ghost agents for performing customer service operations on

one of the plurality of hosts, the customer service application having a service interface configured to prevent unauthorized access to the customer service application,

wherein at least a portion of said hosts move from one grid within said grid environment to another grid, and wherein said ghost agents responsively move from said one grid to said another grid in response to movement of said associated host.

17. (Currently Amended) A machine-readable storage medium having stored thereon, a computer program having a plurality of code sections, said code sections executable by a machine for causing the machine to perform the steps of:

providing a customer service application configured to register a plurality of hosts operating in a plurality of grids in a grid environment for performing host-based operations and to convey control signals for synchronizing a plurality of ghost agents operating in said plurality of grids for performing customer service operations on one of the plurality of hosts, the customer service application having a service interface configured to prevent unauthorized access to the customer service application;

wherein said plurality of hosts are software objects for an application domain distributed within a grid environment, said grid environment being a distributed computing system that includes a plurality of hardware and software components;

receiving a problem indication relating to ~~a user application~~one of said plurality of hosts;

identifying at least one of the plurality of hosts operating within a grid of said grid environment;

associating a ghost agent within said grid with said at least one identified host, said ghost agent being configured to include at least one of a test engine, a ghost log, and a controller, wherein the test engine loads test routines into said ghost agent, executes the test routines in response to received test commands, and analyzes within said ghost agent results of the executed test routines, wherein the ghost log stores log data internally within said ghost agent and, periodically or at irregular intervals, deposits the log data to a local location, after which the ghost agent clears the ghost log, wherein said controller accepts control signals from an external source and controls at least one of a life-span of said ghost agent and resources used by said ghost agent, and wherein said ghost agent is configured to replicate at least one action of said at least one identified host within said grid;

retrieving log data stored at the local location and conveying the retrieved log data to a ghost log repository using at least one data-reaping object;

recording data relating to said replicated actions;

responding to said problem based at least in part upon said recorded data;

moving said at least one identified host from said grid to another grid within said grid environment; and,

in response to said moving of said at least one identified host, moving said ghost agent from said grid to said another grid.

30. (Currently Amended) A system, having at least one processor, for supporting an application within a grid environment comprising:

means for registering a plurality of hosts operating in a plurality of grids in said grid environment for performing host-based operations and to convey control signals for synchronizing a plurality of ghost agents in said plurality of grids for performing customer service operations on one of the plurality of hosts, the customer service application having a service interface configured to prevent unauthorized access to the customer service application;

wherein said plurality of hosts are software objects for an application domain distributed within a grid environment, said grid environment being a distributed computing system that includes a plurality of hardware and software components;

means for receiving a problem indication relating to one of said ~~application~~plurality of hosts;

means for identifying a host within a grid of said grid environment;

means for associating a ghost agent within said grid with said host, said ghost agent being configured to include at least one of a test engine, a ghost log, and a controller, wherein the test engine loads test routines into said ghost agent, executes the test routines in response to received test commands, and analyzes within said ghost agent results of the executed test routines, wherein the ghost log stores information internal to said ghost agent, wherein said controller accepts control signals from an external source and controls at least one of a life-span of said ghost agent and resources used by said ghost agent, and wherein said ghost agent is configured to replicate at least one action of said at least one identified host within said grid;

means for retrieving log data stored at the local location and conveying the retrieved log data to a ghost log repository;

means for recording data relating to said replicated actions;

means for responding to said problem based at least in part upon said recorded data;

moving said at least one identified host from said grid to another grid within said grid environment; and,

means for moving said ghost agent from one grid to within said grid environment to another grid in response to moving said host from said one grid to said another grid.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Mitchell/
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10/4/07

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